

AMENDMENTS TO THE DRAWINGS

Please amend the figures as shown in the enclosed replacement sheets. The attached sheets of drawings include changes to Drawing sheets 1 to 4 of the present application with new Figures 1A and 3A, showing, respectively, a supercapacitor [9] and an electromagnetic relay [R]. Further, conventional symbols are now shown for the battery [2] on Figures 1 to 9.

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Information Disclosure Statement

The Examiner asserts that the information disclosure statement (IDS) filed October 6, 2004, fails to comply with 37 C.F.R. 1.98(a)(3) because it does not contain a concise explanation of the relevance as it is presently understood of each patent listed that is not in the English language. Applicant respectfully disagrees for the reasons detailed below.

As discussed in MPEP § 609, A(3) “Concise Explanation of Relevance for Non-English Language Information,” where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English language version of the search report or action which indicates the degree of relevance found by the foreign office. Applicant respectfully notes that references DE-10213105 and DE-4007526 are listed in the foreign search report of International Application No. PCT/FR/03/01167, which corresponds to the present application and was submitted with the IDS filed on October 6, 2004. References DE-10213105 and DE-4007526 are listed, respectively, as “X” and “A” references. Thus, Applicant respectfully asserts that the IDS filed on October 6, 2004, including references DE-10213105 and DE-4007526, does comply with 37 C.F.R. 1.98(a)(3).

Accordingly, Applicant respectfully requests that the PTO/SB/08 from the IDS filed on October 6, 2004, be initialed to include references DE-10213105 and DE-4007526,

and returned. If these Information Disclosure Statements have not been considered, appropriate consideration thereof is respectfully requested.

Disposition of Claims

Claims 1-7 were pending in this application. By way of this reply, new claims 8-10 have been added to this application. Claim 1 is independent. The remaining claims depend, directly or indirectly, from claim 1.

Claim Amendments

Independent claim 1 has been amended by way of this reply to clarify the invention, to remove reference numerals, and to require that the device for supplying the energy is an energy storage device that can be connected to the rotating electrical machine by means of a switching device during the predetermined period of time of overexcitation of the machine. No new subject matter has been added by way of this amendment, as support for this amendment may be found, for example, in paragraphs [0064]-[0065] of the original Specification. Further, claims 2-7 have been amended to clarify the claimed invention and remove reference numerals. No new matter has been added by way of these amendments.

Objection(s)

Drawings

The drawings are objected to for failing to show the conventional names as described in the specification for the elements shown in figures with non-conventional symbols. The drawings have been amended in this reply to show the conventional names as described in the specification for the elements shown in figures. For example, battery 2 is

now shown in the figures with a conventional symbol. Further, new Figure 1A shows a capacitor 9 connected between terminal 10 and ground. Applicant respectfully notes that other devices, such as a starter/alternator and an energy storage device, are shown in other documents in the art, including, for example, U.S. Patent No. 6,420,793 issued to Gale *et al.* (hereinafter “Gale”) (*see, e.g.*, Gale, Figures 1 and 2). Accordingly, withdrawal of this rejection with respect to the drawings is respectfully requested.

The drawings are objected to because reference characters “20” and “30” have both been used to designate an electronic housing. By way of this reply, paragraphs [0052]-[0054] of the specification have been amended to replace instances of “electronic housing” with “command and control unit.” No new matter has been added by way of correction of these typographical errors. Applicant respectfully notes that the drawings correctly indicate a command and control unit as reference character “20” and a housing as reference character “30.” Accordingly, withdrawal of this objection to the drawings is respectfully requested.

The drawings are objected to for failing to show every feature of the invention specified in the claims. Specifically, the Examiner asserts that the electromagnetic relay, the diode D with a switch R mounted in series must be shown or the features cancelled from the claims. Applicant respectfully notes that in one or more embodiments of the invention, the switching device 6 comprises a diode D1 with which a switch R, which may be an electromagnetic relay. New Figures 1A and 3A have been added by way of this reply to show one embodiment of a supercapacitor 9 and an electromagnetic relay R, respectively. Additionally, new paragraphs have been added after current paragraphs [0014] and [0016] to provide a brief description of new Figures 1A and 3A. Applicant notes that the description of these elements is fully supported, for example, in paragraph [0074] of the Specification as

filed. Accordingly, every feature of the invention specified in the claims is shown in the drawings, and withdrawal of the rejection is respectfully requested.

Specification

By way of this reply, paragraphs [0052]-[0054] have been amended to replace instances of “electronic housing” with “command and control unit,” as described above. Further, Applicant respectfully notes that reference numeral 1 in the application as filed refers to “a multi-phased and reversible rotating electrical machine,” which in one or more embodiments of the invention may be, for example, an electronic starter, as indicated in paragraphs [0018]-[0019] and on pages 8 and 9 of the Specification as filed. Accordingly, any objections to the Specification are respectfully requested.

Rejection(s) under 35 U.S.C. § 112

Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner asserts that the claims are generally narrative and indefinite, failing to conform to current U.S. practice. Claims 1-7 have been amended by way of this reply to clarify the claimed invention and to conform to current U.S. practice. For example, the phrase “downstream from the switching device,” mentioned by the examiner, has been removed from independent claim 1. Accordingly, Applicant respectfully asserts that the claims are not indefinite, and withdrawal of the § 112, second paragraph, rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,420,793 issued to Gale *et al.* (hereinafter “Gale”). Independent claim 1 has been amended in this reply to clarify the invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

The present invention is directed to an arrangement for carrying out a method for controlling a multi-phased and reversible rotating electrical machine. As seen with respect to one or more embodiments of the invention, a switching device 6 makes it possible to connect an energy storage source (such as a supercapacitor 9) to an alternator-starter 1 (*see, e.g.*, Specification, paragraph [0060]).

In one or more embodiments of the invention, the machine is overexcited during braking and the energy recovered during this braking is stored (*see, e.g.*, Specification, paragraph [0012]). For example, as discussed with reference to paragraph [0066] of the Specification, when a driver of a vehicle operates the brakes, the control unit first causes a change in the position of the switch 6, which is shifted from the position shown in solid lines in Figure 1 to the position shown in dashed lines, in which the supercapacitor 9 is placed in the circuit (*see, e.g.*, Specification, paragraph [0068]).

Accordingly, amended independent claim 1 requires that the device for supplying the energy is an energy storage device that can be connected to the rotating electrical machine by means of a switching device during the predetermined period of time of overexcitation of the machine.

Gale does not disclose at least the above limitations of the claimed invention. In contrast to the claimed invention, Gale is directed to a power delivery circuit for starting an engine in a vehicle having a pulse charge alternator/starter system (*see* Gale, col. 2, lines

60-63). Gales discloses a starter/alternator 10 that receives charge from a primary energy storage device 18 when operating as a starter motor, and maintains charge on primary energy storage device 18 when operating as an alternator or generator. However, it would be clear to one skilled in the art that Gale does not contemplate that the energy storage device 34 is connected to starter/alternator 10 during a predetermined period of time of overexcitation of the starter/alternator 10, as required by amended independent claim 1.

In view of the above, Gale fails to show or suggest the invention as recited in amended independent claim 1. Thus, amended independent claim 1 is patentable over Gale. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 103

Claims 2-7 are rejected under 35 U.S.C. § 103(a) as being obvious over Gale. Independent claim 1 has been amended in this reply to clarify the invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

As discussed above, the present invention is directed to an arrangement for carrying out a method for controlling a multi-phased and reversible rotating electrical machine. Further, as discussed above, amended independent claim 1 requires that the device for supplying the energy is an energy storage device that can be connected to the rotating electrical machine by means of a switching device during the predetermined period of time of overexcitation of the machine.

Gale, as discussed above, does not disclose at least the above limitations of the claimed invention. Further, as discussed above, Gale fails to show or suggest at least the above limitations of amended independent claim 1. Thus, amended independent claim 1 is

patentable over Gale. Claims 2-7, directly or indirectly dependent from claim 1, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

New Claims

By way of this reply, new claims 8-10 have been added to the application to require respectively, that the switching device is mounted between the rotating electrical machine and the energy storage device, that the switching device is a supercapacitor with low internal resistance, and that at least one of the transistors is of the metal-oxide-semiconductor field-effect transistor (MOSFET) type. No new matter has been added by way of these amendments, as support for these amendments may be found, for example, the claims and in paragraphs [0059]-[0061] of the Specification. As new claims 8-10 depend, directly, from independent claim 1, Applicant respectfully asserts that new claims 8-10 are allowable for at least the reasons discussed above with respect to claim 1.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 17170/002001).

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Respectfully submitted,

By 

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Attachments: Replacement Drawing Sheets (4 pages, 11 Figures)